

IN THE CLAIMS:

Please cancel claims 1-17 without prejudice or disclaimer and insert new claims 18-29 as follows.

Claims 1-17 (Canceled)

18. (New) A communications device, comprising:

a plurality of network ports, said plurality of network ports including a trunk group formed of a subset of the plurality of network ports, said trunk group communicating with aggregated network links;

a packet routing unit connected to said plurality of network ports, said packet routing unit receiving a packet, said packet including a source address value, and a destination address value, said packet routing unit determining said trunk group as a destination port; and

a load balancing unit in communication with the packet routing unit, said load balancing unit configured to select the destination port from the subset of network ports in the trunk group, said destination port being determined as a function of a source port ID value corresponding to a source port for the packet,

wherein said load balancing unit balances a distribution of packets among the subset of network ports of the trunk group.

19. (New) A communications device as recited in claim 18, wherein said load balancing unit generates the source port ID value based upon the source address value of

the packet, and therefore selects the destination port as a function of the source address value.

20. (New) A communications device as recited in claim 18, wherein said packet routing unit identifies the trunk group as a single logical port.

21. (New) A communications device as recited in claim 18, wherein said packet routing unit includes a packet routing table which generates a trunked port ID value based upon the destination address value for the packet.

22. (New) A communications device as recited in claim 21, wherein said load balancing unit comprises:

a systems administration unit providing a plurality of port mapping values, each port mapping value being associated with a corresponding one of the plurality of network ports, each port mapping value including a plurality of port select values, each port select value being associated with a corresponding one of a plurality of trunked ports of the switch, each of the plurality of trunked ports including a corresponding subset of the plurality of network ports, each of the port select values indicating a corresponding selected one of the corresponding subset of the network ports of the trunk group;

a trunk port configuration unit coupled to receive said port mapping values from said system administration unit, said trunk port configuration unit including a plurality of configuration registers for storing corresponding ones of the port mapping values; and

an address resolution circuit connected to said trunk port configuration unit.

23. (New) A communications device as recited in claim 22, wherein said address resolution circuit comprises:

a first multiplexer having a plurality of inputs for receiving corresponding ones of said port mapping values, a control port responsive to said source port ID value, and an output providing a selected one of said port mapping values in response to said source port ID value being applied to said control port of said first multiplexer,

a destination register coupled to said first multiplexer for storing said selected port mapping value, and having a plurality of outputs each providing a corresponding one of said port select values, and

a second multiplexer having a plurality of inputs coupled to said outputs of said destination register, a control port responsive to said trunked port ID value, and an output providing a selected one of said port select values in response to said trunked port ID value being applied to said control port of said second multiplexer, said selected port select value indicating said destination port.

24. (New) A communications device as recited in claim 22, wherein said system administration unit comprises a processing unit and a memory, and wherein said port mapping values are programmable.

25. (New) A communications device as recited in claim 18, wherein said load balancing unit comprises:

a register for storing the source address value of the packet, the register including at least one register output, said at least one register output providing a port select value derived from the source address value, the port select value for indicating a selected one of a plurality of network ports of a destination trunked port for the packet.

26. (New) A communications device as recited in claim 25, further comprising a multiplexer having a plurality of inputs for receiving a corresponding one of the port select values, a control port responsive to a predefined bit select value, and an output providing a selected one of said port select values.

27. (New) A communications device as recited in claim 18, wherein said load balancing unit comprises:

a first register for storing the source address value of the packet, said first register including at least one output providing a corresponding first value derived from said source address value; and

a second register for storing the destination address value of the packet, said second register including at least one output providing a second value derived from said destination address value.

28. (New) A communications device as recited in claim 27, wherein said load balancing means further comprises:

an exclusive NOR logic unit responsive to said first and second values, said exclusive NOR logic unit providing a port select value for indicating a selected one of the plurality of network ports of the trunk group.

29. (New) A communications device as recited in claim 18, wherein each trunk group provides a bandwidth of approximately X times Y , wherein X is a bandwidth of each network link, and Y is a number of network links associated with the trunk group.